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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/086,908

Filing Date: February 28, 2002

Appellant(s): FETHEROLF, WILL G.

Todd A. Rathe
For Appellant

EXAMINER'S ANSWER

MAILED

FEB 05 2007

GROUP 2800

This is in response to the appeal brief filed 12/12/06 appealing from the Office action mailed 07/06/05.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,628,430	SILVERBROOK ET AL.	9-2003
JP2000-184911	MIYAMOTO ET AL.	4-2000
5,397,192	KHORMAEE	3-1995
5,929,894	KIKUCHI	7-1999
6,290349	SILVERBROOK ET AL.	9-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 29, 31-32, 34-40, 44-48, 50-52, 54-55, and 58-61 are rejected under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

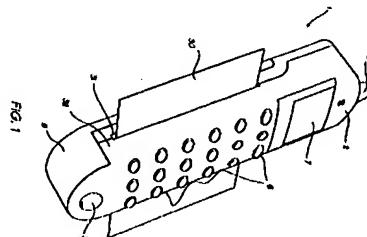
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

NOTE: For the purposes of this rejection, figure 1 of Silverbrook et al will be viewed in an orientation 90° to the orientation shown in the figure. The reoriented figure 1 is shown below.

Claims 29, 31-32, 34-40, 44, 54, 58-59, and 61 rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al (US Pat 6628430) in view of Miyamoto et al (JP Pat 2000-184911).

Silverbrook et al discloses:

- {claim 29} A media processing device (figure 1); a media processing engine having an outer housing with a media input along a first external face of the housing and configured such that a portion of a medium extends outwardly beyond the input as the medium is being mechanically fed towards the engine and an output along a second external face of the housing, wherein the first face and the second face are opposite one another (figure 1)



- {claim 31} wherein the device, when vertically oriented, has a height, a width, and a depth, wherein the first face and the second face each define the width and the depth of the engine and wherein the depth is smaller than the height and the width (figure 1)
- {claim 32} wherein the device has a straight-through media path (figure 1)
- {claims 34-35} wherein the media output is configured to discharge media while the media is in a vertical orientation (figure 1)

- {claim 44} wherein the media input comprises an external slot configured to enable individual sheets of media to be manually fed into the slot (figure 1)
- {claim 54} wherein the media processing engine is configured to print upon the media (abstract)
- {claim 58} A media processing device (figure 1); a media processing engine having a media input along a first external face of the device and configured such that a portion of a medium extends outwardly beyond the input as the medium is being mechanically fed towards the engine and an output along a second external face of the device opposite the first external face, wherein the media input is configured to receive media while the media is in a vertical orientation (figure 1)
- {claim 59} A method for processing media (figure 1); device having a media processing engine (figure 1); mechanically feeding media through a media input along an external face of the device to the engine while the media is substantially vertical (figure 1); printing upon the media (abstract); discharging the printed upon media out an external media output opposite the external media input from the engine while the media is in the substantially vertical orientation (figure 1)
- {claim 61} holding the ejected media below the media output (figure 1, reference 30)

Silverbrook et al differs from the claimed invention in that it does not disclose:

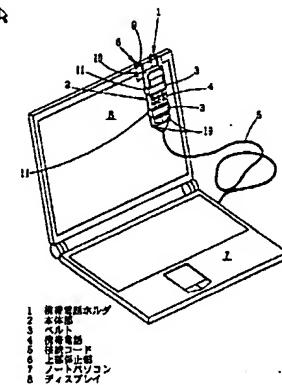
- {claim 29} a structure having a first vertical surface with an upper most extremity; a support coupled to the engine and configured to couple the engine to the structure such that the media output is below the uppermost extremity of the

first vertical surface, wherein the media input is configured to receive media while the media is in a vertical orientation

- {claim 36} wherein the support is configured to couple the engine to the structure such that the media input is below the uppermost extremity of the first vertical surface
- {claim 37} wherein the structure has a top along the uppermost extremity of the vertical surface and wherein the support is configured to extend opposite the top
- {claim 38} wherein the support extends opposite the first vertical surface
- {claim 39} wherein the structure has a second vertical surface opposite the first vertical surface, wherein the top extends between the first vertical surface and the second vertical surface and wherein the support is configured to wrap around the structure to extend opposite the second vertical surface
- {claim 40} wherein the structure has a second vertical surface opposite the first vertical surface, wherein the top extends between the first vertical surface and the second vertical surface and wherein the support is configured to extend opposite the second vertical surface
- {claim 58} a vertical surface; means for supporting the device relative to the vertical surface such that the media output is below an uppermost extremity of the vertical surface
- {claim 59} supporting a device along a vertical surface

Miyamoto et al discloses:

- {claim 29} a structure having a first vertical surface with an upper most extremity (figure 1); a support coupled to the engine and configured to couple the engine to the structure (figure 1, reference 6)



- {claim 58} a vertical surface (figure 1, reference 6); means for supporting the device relative to the vertical surface (figure 1, reference 6)
- {claim 59} supporting a device along a vertical surface (figure 1, reference 6)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Miyamoto et al into the invention of Silverbrook et al. The motivation for the skilled artisan in doing so is to gain the benefit of providing a vertical supporting means for the media processing device, so that it does not have to be held in the hand all the time. The motivation for the skilled artisan in doing so is to gain the benefit of coupling the engine to the structure such that the media output is below the uppermost extremity of the first vertical surface, wherein the media input is configured to receive media while the media is in a vertical orientation; wherein the support is configured to couple the engine to the structure such that the media input is below the uppermost extremity of the first vertical surface; wherein the structure has a top along the uppermost extremity of the vertical

surface and wherein the support is configured to extend opposite the top; wherein the support extends opposite the first vertical surface; wherein the structure has a second vertical surface opposite the first vertical surface, wherein the top extends between the first vertical surface and the second vertical surface and wherein the support is configured to wrap around the structure to extend opposite the second vertical surface; wherein the structure has a second vertical surface opposite the first vertical surface, wherein the top extends between the first vertical surface and the second vertical surface and wherein the support is configured to extend opposite the second vertical surface.

Claims 45-46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al (US Pat 6628430) in view of Miyamoto et al (JP Pat 2000-184911), as applied to claims 29, 31-32, 34-40, 44, 54, 58-59, and 61 above, and further in view of Khormaee (US Pat 5397192).

Silverbrook et al, as modified, discloses:

- {claim 46} wherein the engine, when vertically oriented, has a height, width, and depth and wherein the depth is smaller than the height and width (figure 1)

Silverbrook et al, as modified, differs from the claimed invention in that it does not disclose:

- {claim 45} wherein the media input is configured to receive media having a width of at least 8 inches

Khormaee discloses “Printers are often called upon to print on a wide variety of recording media having different widths and printing surfaces. Common recording media include standard 8.5X11 inch paper...” (column 1, lines 53-57).

In light of this teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Khormaee into the invention of modified Silverbrook et al so that the media input can be configured to receive media having a width of at least 8 inches. The motivation for the skilled artisan in doing so is to gain the benefit of increasing printer versatility; the benefits of printing on media such as standard 8.5X11 inch paper are well known to one of ordinary skill in the art.

Claims 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al (US Pat 6628430) in view of Miyamoto et al (JP Pat 2000-184911), as applied to claims 29, 31-32, 34-40, 44, 54, 58-59, and 61 above, and further in view of Kikuchi (US Pat 5929894).

Silverbrook et al, as modified, teaches all limitations of the claimed invention except for the following:

- {claim 47} the engine includes a photoconductive drum.

Kikuchi discloses a photoconductive drum (figure 1, reference 16).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the printing system disclosed by modified Silverbrook et al with the printing system disclosed by Kikuchi. The motivation for the skilled artisan in doing so is to gain the benefit of effecting faster print speeds.

Claims 48, 50-52, 55, and 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al (US Pat 6628430) in view of Miyamoto et al (JP Pat 2000-184911), as

applied to claims 29, 31-32, 34-40, 44, 54, 58-59, and 61 above, and further in view of Silverbrook et al (US Pat 6290349).

Silverbrook (US Pat 6628430), as modified, teaches all limitations of the claimed invention except for the following:

- {claim 48} including a media receiver proximate the media output
- {claim 50} wherein the receiver receives media from the media output while the media is in a substantially vertical orientation and holds the media in a substantially vertical orientation
- {claim 51} wherein the receiver is configured to support the media in a tilted orientation directed away from the vertical surface
- {claim 52} wherein the receiver is configured to support the media such that at least a portion of the media extends beyond a front of the print engine opposite the vertical surface
- {claim 55} wherein the media input is configured to receive an individual sheet of media from a stack of media positioned proximate the input
- {claim 60} positioning a stack of individual sheets of media proximate to the media input

Silverbrook et al (US Pat 6290349) discloses:

- {claim 48} including a media receiver proximate the media output (figure 2, reference 619)

- {claim 55} wherein the media input is configured to receive an individual sheet of media from a stack of media positioned proximate the input (figure 2, reference 604)
- {claim 60} positioning a stack of individual sheets of media proximate to the media input (figure 2, reference 604)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Silverbrook et al (US Pat 6290349) into the invention of modified Silverbrook et al (US Pat 6628430). The motivation for the skilled artisan in doing so is to gain the benefit of providing a media receiver to catch the output media, as well as to provide a media cartridge, so that media do not need to be fed manually. The combination naturally suggests the receiver receives media from the media output while the media is in a substantially vertical orientation and holds the media in a substantially vertical orientation; the receiver is configured to support the media in a tilted orientation directed away from the vertical surface; and the receiver is configured to support the media such that at least a portion of the media extends beyond a front of the print engine opposite the vertical surface.

(10) Response to Argument

Legal Standards

The Appellant has set forth the legal standards concerning a rejection under 35 U.S.C. §103(a). The Examiner agrees with these legal standards, but maintains that the prior rejection fully complies with such standards.

Claims 29, 58, and 59

The Appellant argues that "Neither Silverbrook '430 nor Miyamoto, alone or in combination, disclose or suggest a media processing device or a method for processing media wherein the device is supported along a vertical surface, where media is fed through a media input along an external face of the device to an engine while the media is substantially vertical and is discharged from an external media output opposite the media input." The Examiner respectfully disagrees. As shown in the prior rejection, Silverbrook '430 demonstrates a media processing device in a portable telephone where media is fed through a media input along an external face of the device to an engine and is discharged from an external media output opposite the media input. Miyamoto demonstrates mounting such a portable telephone in a substantially vertical orientation. The combination of Silverbrook '430 in view of Miyamoto thus suggests printing in a vertical orientation.

The Appellant further argues, "However, in contrast to the assertion made by the Examiner, it would not be obvious to one of ordinary skill in the art to modify the mobile phone of Silverbrook '430 to additionally include the support disclosed by Miyamoto since such a modification would destroy the intended function of the mobile phone of Miyamoto or of the phone of Silverbrook '430 or would require a complete redesign of the support disclosed by Miyamoto." This is not true. The Appellant's argument would hold more weight if Silverbrook '430 was directed to a portable phone printer, but the support disclosed in Miyamoto was not. Similarly, the Appellant's argument would also hold more weight if Silverbrook was directed to a large-scale printer while Miyamoto was directed to providing a support for portable phones. However, Silverbrook is directed to a portable phone printer and Miyamoto is directed to a

vertical support for portable phones. As such, rather than destroying each other as references, Silverbrook and Miyamoto appear to complement each other instead.

The Appellant further argues, "To modify printer phone 1 of Silverbrook '430 to additionally include telephone holder 1 (of Miyamoto) would render printer phone 1 unsatisfactory for its intended purpose, printing. In particular, belts 3 of Miyamoto would necessarily extend across slot 31 and interfere with or obstruct inputting of media into slot 31. Miyamoto specifically discloses belts 3 as extending across a central portion of phone 1 across its keypad. To similarly position belts 3 across the keypad of Silverbrook '430 would result in belts 3 extending across and obstructing inputs slot 31 of Silverbrook '430. Moreover, no teaching or suggestion exists for alternately modifying the location of belts 3 of Miyamoto or omitting belts 3...To reposition the uppermost belt 3 would result in the belt 3 obstructing the display of the cell phone or may result in holder 1 not being able to accommodate differently sized cell phones. Moreover, as clear from drawing 3 of Miyamoto, such belts are required to retain the cell phone in place and to prevent the cell phone from falling off of legs 19...Thus, the hypothetical combination of Silverbrook '430 and Miyamoto as proposed by the Examiner would either render unsatisfactory the intended purpose of Silverbrook '430, printing, or would render unsatisfactory the intended purpose of Miyamoto, securely retaining and supporting a cell phone."

Here, the Appellant's argument contains a number of flaws. First, the Appellant overlooks the fact that the telephone holder in Miyamoto is adjustable. The Appellant appears to be trying to strictly adhere to the size and position of the belts 3 of Miyamoto as shown in figures 1 and 3, thus implying that the print slot of Silverbrook would be necessarily covered. However,

the figures in Miyamoto are meant strictly as representative examples. Miyamoto clearly discloses the expandability, adaptability, and adjustability of its supporting mechanism, such as in paragraphs 0007 and 0008. This makes sense because if this were not the case, the portable telephone holder of Miyamoto could only be used for one size of cell phone, which would be impractical; one of ordinary skill in the art knows that cell phones come in different shapes and sizes. Miyamoto clearly discloses the desire to create a hands-free support system for portable telephones, regardless of their shape or size.

Looking at the telephone printer in figure 1 of Silverbrook, there is clearly enough room to put belts above and below the media input such that the telephone could be supported and still print media. In such a configuration, even though the paper would be fed from right to left, the media itself would still be in a vertical orientation (since the media would be parallel to the vertical laptop screen even as it's being fed horizontally). Given the adjustability of the support apparatus of Miyamoto, it is also apparent that the telephone in Silverbrook could be rotated 90° and belts could be placed across the length of the telephone body to support the phone. In such an orientation, the media would still be in a vertical orientation, but the media would be fed in an up and down direction. The Appellant will argue that the support legs 19 will necessarily block the media input in such a configuration. However, such an argument again overlooks the adaptability of the telephone holder disclosed in Miyamoto. The legs could be placed far enough apart to not block the media input.

Another flaw in the Appellant's argument is the contention that Silverbrook would render unsatisfactory the intended purpose of Miyamoto, and vice versa. The Examiner could not disagree more. The Examiner believes that the combination of Silverbrook in view of Miyamoto

only enhances the intended purpose of each reference separately. The Appellant slightly misstated the intended purpose of Miyamoto. It isn't simply to securely retain and support a cell phone; it is to attach a mobile phone to a notebook PC in a freely attachable and detachable manner so that the freedom of the user's hands can be secured (paragraph 0005). The key purpose here is the ability to free one's hands from one's phone when using a computer. Silverbrook in view of Miyamoto essentially produces a hands-free portable printer. The advantages of such a combination should be readily apparent to one of ordinary skill in the art. By incorporating Silverbrook's printing function into the system of Miyamoto, a user gains the advantage of having a portable printer to complement their portable computer. By incorporating Miyamoto's hands-free function into the phone of Silverbrook, a user gains the advantage of printing without having to hold the printer, which is a well-known benefit in the printing art. After all, most printers operate as hands-free devices. It should be clear that the combination of Silverbrook in view of Miyamoto does not cause a destruction of both references. Rather, the combination results in a natural and intuitive improvement over each reference's individual functions.

Claim 31

The Appellant argues, "The Examiner fails to provide any support, motivation or suggestion for reorienting printer phone 1 of Silverbrook '430 other than the teachings found in Appellant's own disclosure. Such hindsight in view of Appellant's own disclosure is impermissible...Neither Silverbrook nor Miyamota provide any motivation or suggestion for

alternatively connecting portable telephone holder 1 of Miyamoto to printer phone 1 of Silverbrook '430 in an alternative orientation other than that shown in drawing 1 of Miyamoto."

The Examiner has addressed this argument in the response above, but will again emphasize that the figures of Miyamoto are simply representative figures, which the Examiner do not believe are meant to be binding. Miyamoto does not disclose its support system to be limited to a specific phone orientation. Rather Miyamoto discloses adjustable features for the purpose of freeing a user's hands. The phone does not have to be oriented in a specific direction to accomplish this primary motivation of creating a hands-free system. Miyamoto discloses that the supporting belts it uses are **fitted** to the main body of the phone (emphasis mine; see abstract). This implies a customizability of the belts in relation to the main body of the phone. Furthermore, the Appellant is reminded that a cellular phone is a portable device, which can be held by a support in a number of ways, without interfering with its main function. The main teaching of Miyamoto is that it provides an adaptable system for portable telephones such that a user's hands can be freed (paragraph 0005). The orientation by which a phone is placed in the adaptable support does not change the fact that it is indeed placed in the support, and thus accomplishes the primary purpose of freeing hands.

Claim 61

The Appellant's arguments in this section are rendered moot in light of the Examiner's response above. It has been established that the phone can be oriented in the support of Miyamoto in a way such that the media is held below the media output.

Claims 45-46

The Appellant argues that "Enlarging printer phone 1 of Silverbrook '430 such that entry slot 31 has a dimension of at least 8 inches would destroy the intended function of printer phone as being a handheld mobile phone. Practicality would dictate one of ordinary skill in the art against such a hypothetical modification of Silverbrook '430."

The Examiner has thus far focused much attention to the fact that Silverbrook discloses a portable phone. However, that focus should not detract from the fact that Silverbrook also discloses a printer, and Khormaee clearly teaches that 8.5X11 inch paper is standard for printing. While 8 inches is a larger dimension, it is not so large that it necessarily negates a portable telecommunications system to the point of impracticability. 8 inches can still be considered portable. Take for example a portable laptop computer using Voice over IP technology. The dimensions of a laptop are usually over 8 inches, but it is still considered a portable system, which also provides a telephonic service. Silverbrook '430 discloses both printing functions and telephonic functions. The addition of Khormaee merely suggests enhancing the size of the printing function while still maintaining telephonic functions. More importantly, the basic principle taught by Silverbrook in view of Miyamoto is that there can be a vertical printer, which is mounted from a vertical surface. Any increase or decreases in dimensions of scale do not alter this fundamental principle.

Claim 47

The arguments in this section are rendered moot in view of the responses above.

Claim 51

The Appellant argues, "However, Silverbrook '430 discloses a handheld mobile phone with integral printer in which media is discharged along its side. Tray 619 of Silverbrook '349 is configured to receive media discharged from the bottom of a printer. Examiner has failed to cite any teaching or suggestion in either Silverbrook '430 or Silverbrook '349 as to how tray 619 would somehow be mounted to printer phone of Silverbrook '430."

The Examiner believes that the Appellant is narrowing the scope of the claimed invention by over-focusing on where Tray 619 of Silverbrook '349 is located. The important teaching of Silverbrook '349 is not that it contains a tray at the bottom of the device, the important teaching is that it contains a tray at the **output** of the device in order to catch media that's output (emphasis mine). This is the teaching that's being incorporated into Silverbrook '430. When reorienting the printer of Silverbrook '430, as discussed above, the incorporation of the receiver tray of Silverbrook '349 will serve to support the media in a tilted orientation directed away from the vertical surface, as demanded by the claimed invention.

Claims 55 and 60

The Appellant argues, "However, media tray 607 disclosed by Silverbrook '349 is internally located within printer 601. Nowhere does Silverbrook '349 or Silverbrook '430 provide any teaching, suggestion or even motivation for somehow modifying the handheld mobile phone of Silverbrook '430 to include an internal print tray such as tray 607 of Silverbrook '349. Moreover, to somehow add an internal print tray 607 as disclosed by Silverbrook '349 would seemingly destroy the intended purpose of Silverbrook '430 to provide a handheld mobile

phone. In addition, since the mobile phone of Silverbrook '430 feeds media in a horizontal side-to-side fashion, it would not be possible to add an internal printer tray such a printer tray 607 of Silverbrook '349 without requiring a complete reconstruction of the mobile phone of Silverbrook '430."

The Examiner believes that the most telling evidence against the Appellant's argument is that both Silverbrook '349 and Silverbrook '430 are directed to cell phone printers. The Appellant tries to draw all sorts of distinctions between the two references, but really, the main difference between the two references is that one phone printer incorporates an internal print tray, and the other doesn't. Indeed, that is the very teaching that is being incorporated through the 103 rejection. It is well known to one of ordinary skill in the art that external and internal media feed mechanisms are available, and often interchangeable. The Appellant's argument of Silverbrook '430 feeding media in a horizontal side-to-side fashion does not appear to hold much weight. After all, if a system can feed media side-to-side, it can surely receive that media from an internal paper cartridge, regardless of orientation. Furthermore, the Examiner has also established above that the phone printer could be reoriented, so that this side-to-side printing becomes up-to-down printing.

Conclusion

In general, the Examiner believes that the Appellant is narrowing the scope of the claimed invention by legalistically adhering to dimensions and directions that were simply disclosed as representative models. The basic principle of the claimed invention is that there is a

printer, which can be mounted on a vertical surface and can thus execute vertical printing. This principle is exactly what Silverbrook '430 in view of Miyamoto and the other references teach.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Machine-Assisted Translation for JP2000-184911-A. This is the official translation, which should be distinguished from the previously submitted unofficial translation.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Leonard Liang

lsl *LL*
January 24, 2007

Conferees:

Stephen Meier *SM* Darren Schuberg *DS*

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